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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,361	07/20/2001	Alkinoos Vayanos	000315	2255

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EXAMINER	
TRINH, TAN H	

ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/910,361	VAYANOS ET AL.	
	Examiner	Art Unit	
	TAN TRINH	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 17 and 19 are newly added on 6-16-2006, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 17, the new limitation of the GPS code search range **independent of timing offset of integrated** GPS/wireless terminal. And Regarding claim 19, the new limitation of the **GPS/wireless terminal unit having an uncertainty area distinct** from the base station; Are not support in specification on paragraphs [0065-0069] and [0073-0076].

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloebaum (U.S. Patent No. 6,188,351) in view of Longaker (U.S. Patent No. 6271,788). Further in view of Da (U.S. Patent No. 6636744).

Regarding claims 1, 3, 6, 9, 11 and 14, Bloebaum teaches a system for determining a GPS receiver code-phase search range in an integrated GPS/wireless terminal unit operating in a wireless network (see figs. 1 and 1a-b, fig. 2A, col. 3, lines 55-col. 4, line 5, and col. 11, lines 19-30), the system comprising: a receiver operable to generate a GPS time reference (see fig. 5 GPS epoch clock 66); a controller operable to calculate a GPS code-phase search range with reference to a base station geographic location (see fig. 5, GPS processor 58), the wireless coverage area (see figs. 1B and 2A), the GPS time reference and the estimated wireless signal propagation delay within the coverage area (see fig. 2A and col. 3, line 64-col. 4, line 5), Bloebaum discloses that the base station determines the code-phase search range (see figs. 1 and 1a-b, fig. 2A-2B, col. 3, lines 55-col. 4, line 5, and col. 11, lines 19-30, and figs. 2a-2b, col. 9, line 19-col. 10, line 67). But Bloebaum fails to teach the system determines the code-phase search range and transmit to the mobile station.

However, Longake teaches the system determine the code-phase search range and transmit to the mobile station (see figs. 1-3, col. 2, lines 23-39, and col. 3, line32-col. 4, line 12, col. 7, lines 10-43).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Bloebaum, and by the providing of the teaching of Longake on the system determines the code-phase search range and transmit to the mobile station thereto in order to provide user with better navigational accuracy, differential GPS improves navigational reliability by assuring the user that the GPS signals are being checked and eliminated if necessary (see Longake col. 7, lines 39-42).

Still regarding claims 1, 3, 6, 9, 11 and 14, Bloebaum teaches FIGS. 2a and 2b show a simplified view of a single GPS satellite i and its coordinate relationships to a particular BTS 20 at position x.sub.k and the GPS-MS 10 at position u. The GPS signal acquisition is part of the range-measurement process in the GPS-MS 10. These range measurements are subsequently used to compute an estimate of the position of the GPS-MS 10. According to FIG. 2, the range measured by the GPS-MS 10 at time t from satellite i is given by equations 1-5 (see fig. 2a-b and col. 9, lines 19-col. 10, lines 50). But Bloebaum does not mention the newly added: an angle between a vector extending from the base station to a GPS satellite and a vector extending from the base station to the GPS/wireless terminal unit. And a variance of position error of the location reference. Such teaching is taught by Da (see fig. 5, the elevation angle α is an angle between a vector extending from the base station to a GPS satellite, and an azimuth angle Φ corresponding to satellite 12-J and WGP 24 is a vector extending from the base station to the GPS/wireless terminal unit, see figs. 4-5, and col. 3, lines 36-col. 4, lines 9). And for a variance of position error of the location reference calculation and calibration (see col. 3, lines 52-col. 5, lines 20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bloebaum and Longake with Ba, In order to provide user sector information from base station currently in communication with GPS terminal currently located.(see Da col. 3, lines 52-65).

Regarding claims 2, 4, 7, 10, 12 and 15, Bloebaum teaches wherein the GPS code-phase search range is defined by a center value and a size value (see figs. 2A-B, col. 9, lines 19-col. 10, line67).

Regarding claims 5, 13, Bloebaum teaches for obtaining a time offset utilizes the round-trip wireless signal propagation time between the base station and the terminal unit to establish the time offset (see col. 4, lines 39-43).

Regarding claims 8 and 16, Bloebaum teaches for obtaining a location reference utilizes means for providing terrestrial based trilateration to establish the location reference (see col. 14, lines 34-51).

4. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloebaum (U.S. Patent No. 6,188,351) in view of Da (U.S. Patent No. 6636744).

Regarding claim 17, Da teaches a system for determining a GPS receiver code-phase search range to an integrate GPS / wireless terminal unit operating in a wireless network (see figs. 1 and 1a-b, fig. 2A, col. 3, lines 55-col. 4, line 5, and col. 11, lines 19-30), the system comprising: a receiver operable to generate a GPS time reference (see fig. 5 GPS epoch clock 66); a controller operable to calculate a GPS code-phase search range (see fig. 5, GPS processor 58, and col. 14, line 63-col. 16, line 10), the GPS code-phase search range calculated with reference to a base station geographic location (see fig. 5, GPS processor 58, and col. 15, line 13-col. 16, line 10), the wireless coverage area (see figs. 1B and 2A), and the GPS time reference (see fig. 5 GPS epoch clock 66); But Bloebaum does not mention a controller operable to

calculate a GPS code-phase search range of a timing offset of the integrated GPS / wireless terminal unit, and the system determines the code-phase search range and transmit to the GPS terminal.

However, Da teaches a controller operable to calculate a GPS code-phase search range of a timing offset of the integrated GPS / wireless terminal unit (see fig. 6, processor 640, processing the phase offset with timing delay (offset) parameter integrated GPS / wireless terminal unit, on col. 6, lines 16-19, and col. 8, lines 4-33); and the system determines the code-phase search range and transmit to the GPS terminal (see col. 3, lines 52-col. 4, lines 17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Bloebaum, and by the providing of the teaching of Da on the system determines the code-phase search range and transmit to the mobile station thereto in order to provide user with better navigational and accuracy (see Da col. 4, lines 18-33).

Regarding claim 18, Bloebaum teaches wherein the controller is further configured to calculated the GPS code-phase search range with reference to a GPS satellite elevation angle relative to a plane centered at the base station (see figs. 2b, col. 9, line 19-col. 10, line 45).

Regarding claim 19, Bloebaum teaches a system for determining a GPS receiver code-phase search range to an integrate GPS / wireless terminal unit operating in a wireless network (see figs. 1 and 1a-b, fig. 2A, col. 3, lines 55-col. 4, line 5, and col. 11, lines 19-30), the system comprising: a receiver operable to generate a GPS time reference (see fig. 5 GPS epoch clock 66); a controller operable to calculate a GPS code-phase search range with reference to a base

station geographic location (see fig. 5, GPS processor 58), a position estimate of the integrated GPS / wireless terminal unit having an uncertainty area distinct from the base station geographic location (see fig. 2A and col. 3, line 64-col. 4, line 5, and col. 10, line 16-col. 11, line 45), and the GPS time reference (see fig. 5 GPS epoch clock 66); But Bloebaum does not mention the system determines the code-phase search range and transmit to the mobile station.

However, Da also teaches a controller operable to calculate a GPS code-phase search range the integrated GPS / wireless terminal unit (see fig. 6, processor 640, processing the phase offset with timing delay (offset) parameter integrated GPS / wireless terminal unit, on col. 6, lines 16-19, and col. 8, lines 4-33); and the system determines the code-phase search range and transmit to the GPS terminal (see col. 3, lines 52-col. 4, lines 17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Bloebaum, and by the providing of the teaching of Da on the system determines the code-phase search range and transmit to the mobile station thereto in order to provide user with better navigational and accuracy (see Da col. 4, lines 18-33).

Response to Arguments

5. Applicant's arguments with respect to claims 1-19 are have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(571) 273-8300, (for Technology Center 2600 only)

*Hand-delivered responses should be brought to the Customer Service Window (now located at the **Randolph Building, 401 Dulany Street, Alexandria, VA 22314).***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Anderson, Matthew D., can be reached at (571) 272-4177.

The fax phone number for the organization where this application or proceeding is assigned is **(571) 273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh
Division 2618
September 7, 2006

PATENT EXAMINER
TRINH,TAN